

The GS-940-7X Robotic Display Measurement Goniometer.



 **GAMMA SCIENTIFIC**

Finally. A Practical Approach To Large-Screen Display Measurement.



Six-axis robotic arm provides unprecedented measurement speed.

Fast. Compact. Simple to operate. Cost-effective. The GS-940-7X Robotic Display Measurement Goniometer is changing the way large-screen display measurement is performed.

Leveraging proven robotic automation technology and Gamma Scientific's world-renowned light-measurement systems, the GS-940-7X features a robust, six-axis goniometric arm/detector combination that rapidly scans

large-screen displays from any number of user-specified positions and angles. Including steep angles no other measurement system can perform.

What's more, while competing systems continually rotate the display during the measurement process – a cumbersome process that can introduce measurement inaccuracies – the GS-940-7X allows the display to remain 100% stationary throughout the measurement process – replicating real-world application.

Speed, accuracy, robustness.

The GS-940-7X's measurement speed is unprecedented. But not at the cost of precision. Via Gamma Scientific's GS-1290-3 High Speed Spectroradiometer, the system features 70- μm accuracy, multiple fields-of-view (5°, 2°, 1°, 0.5°, 0.33° and 0.1°) and a unique "electronic eyepiece" that superimposes the actual measurement spot on the display area being measured. Further, the system is built tough to withstand the rigors of 24/7 operation in demanding production-floor environments.



Compact, mobile and optimized for simultaneous measurement of multiple production lines.

Exceptionally cost effective.

The GS-940-7X is priced significantly lower than competing systems. Yet this is only where its cost effectiveness begins. Factor in its blazing-fast measurement speed, its ability to measure multiple displays simultaneously and easy-to-share mobility, and it's easy to see this system will pay for itself in the short term.

Measures all display technologies.

Perform a full array of measurements on virtually any display technology, from CRTs and LCDs, to plasma and rear-projection TVs. Measure viewing angle, contrast ratio, uniformity, chromaticity, shadowing, color gamut, response time, flicker, gamma surface reflections and power consumption.



Perform complete hemispherical measurements centered around any point on the screen.

THE GS-940-7X ADVANTAGE.

- Boosts throughput with blazing-fast measurement speed.
- A huge cost saver – priced less than competing systems and makes testing dramatically more efficient.
- Compact and mobile – ideal for factory floors and sharing between labs.
- Robust 6-axis robotic arm design – ready for 24/7 operation.
- Simultaneously tests multiple displays – ideal for streamlining production.
- Easy set-up and operation – a single user can perform a comprehensive measurement in minutes.
- Exacting 70- μ m accuracy for no-compromise performance.
- Multiple fields-of-view: 5°, 2°, 1°, 0.5°, 0.33° and 0.1°.
- Electronic eyepiece superimposes actual measurement spot on display area being measured.
- Automatically compensates for imperfections in hemispherical positioning of display.
- Tests all display technologies.
- Powerful report-generation software.

Measure multiple displays simultaneously.

Perform measurements on multiple displays simultaneously. Imagine the possibilities – for example, configure the system to test unique production lines at the same time.

Compact and mobile.

Featuring a compact footprint and convenient wheel-mounted design, the GS-940-7X is easy to maneuver and requires very little space on the production floor. Additionally, this makes the system easy to share – between production-floor stations and/or testing labs.

Display not perfectly squared up? No problem.

Before performing a measurement routine, the system quickly measures the display for perfect hemispherical positioning. Any imperfections are automatically compensated for by the system software.

Simple to program and operate.

Built with the production floor in mind, the GS-740-7X is push-button simple to operate. In fact, a single operator can perform comprehensive measurements in a matter of minutes. Plus, despite its rich functionality, the system is refreshingly easy to program – simply create measurement-sequence macros via the user-friendly, 32-bit graphics interface. Further, this eliminates the need to allocate senior engineering personnel to your large-screen display-measurement operation. Now production-floor technicians can perform the task on a 24/7 basis.



The system automatically monitors – and compensates for – any imperfections in the hemispherical positioning of the display.

Specifications

GS-940-7X Robotic Goniometer

Angular Repeatability	± 0.01 degrees
Angular Resolution	0.002 degrees
Range Of Motion	± 90 degrees
Reach	Up to 1.3 meters
Maximum Measurement Speed	Approx. 1 measurement/second
Computer Control	USB, RS-232, Ethernet
Software	Standard Windows-based user-interface software
ANSI and CE Compliant	
Power Requirements	220 VAC, 3-phase

GS-1290-3 High Sensitivity Spectroradiometer

Wavelength Range	380-800 nm
Wavelength Resolution	0.4 nm
Spectral Bandwidth	10, 5, 2.5, 1.4 and 1.0 nm
Wavelength Repeatability	0.02 nm
Wavelength Uncertainty	< 0.5 nm
Stray Light Rejection	< 1×10^{-4} @ 8 HPBW from HeNe laser line
Electronic Resolution	16-bit
Sensitivity Range	0.001 to 700,000 cd/m ² (0.0003 to 200,000 fL)
Color Accuracy	(2856 K): CIE 1931xy ± 0.0005
Field-Of-View	5, 2, 1, 0.5, 0.33 and 0.1 degrees
Viewing System	Projected measurement spot onto the screen
Computer Interface	USB 2.0

Global service and support.

The GS-940-7X is backed by our highly trained and responsive global-support team. With representatives in many countries, you'll enjoy the localized service you demand – from installation through deployment and beyond – to ensure your continued success.



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